



**Broadband Infrastructure Application
Submission to RUS (BIP) and NTIA (BTOP)**

Submitted Date: 8/20/2009 7:07:58 AM		Easygrants ID: 2460	
Funding Opportunity: Broadband Initiatives Program and Broadband Technology Opportunities Program		Applicant Organization: Eskimos, Inc.	
Task: Submit Application - Infrastructure Programs		Applicant Name: Debra Shontz	

Additional BTOP Factors Selected By Applicant

- Conformity with Statutory Purposes
- Cost Sharing/Matching
- Reasonableness of Project Budget

The project advances at least one of the statutory purposes for BTOP

Applicant has provided documentation that the project would not have been implemented during the grant period without federal grant assistance.

Applicant has provided a budget that is appropriate to the proposed technical solution and only includes eligible costs.

- **Demonstration the Project Could not be Implemented But For Federal Grant Assistance**
Applicant is providing matching funds of at least 20 percent towards the total eligible project costs?
Yes

7-k. Cost Sharing/Matching Fund Explanation

Eskimo's Inc. is providing matching funds and does need to request a waiver.

C. Executive Summary

Executive Summary of Project for BIP and BTOP:

8. Infrastructure Projects Executive Summary

The North Slope Broadband Initiative is an innovative partnership that bridges the vast distance between the North Slope of Alaska and the rest of the world through the proposed high-speed, broadband Internet services. This partnership of Native corporations; small disadvantaged businesses; and telecommunications experts will provide remote Arctic communities with services that will strengthen and improve local and regional economic development and



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provide an enhanced quality of life, including education, health care, and other critical services.

Through this project, Eskimos Inc., a wholly-owned subsidiary of the Arctic Slope Regional Corporation (ASRC), will accomplish a goal long overdue; the delivery of initial middle mile broadband connectivity to two communities on Alaska's North Slope; Barrow and Nuiqsut. It is the ultimate goal of the project to connect the regions 7,385 residents and six additional communities to the microwave network as funding and opportunity become available. The project will also provide a vital connection through the Bristol Bay region toward the west to complete a loop from southwest Alaska's DeltaNet system, through the Bering Strait and Northwest Arctic regions, and ultimately through Barrow to the fiber connection near Nuiqsut. Under ANCSA §1626, ASRC and all of its majority-owned subsidiaries are deemed to be socially and economically disadvantaged business entities as a matter of law.

All Internet service in the project area now requires a satellite link in the delivery chain. This system is unstable and leads to frequent, if not daily, interruptions in service. This type of system suffers connections with high levels of latency, low bandwidth options, and high cost for end users. With this proposed middle mile network, local service providers will be able to offer the low latency connections necessary for the support of modern, multi-media applications for distance learning services, telemedicine, economic development projects, and culturally diverse programs. For the 5,014 residents within the service area, this entry into modern telecommunications will finally provide the same level of service already enjoyed by most residents of the U.S.

Barrow is the primary community in the service area and a first-class city with a population of 4,581 residents. It is the seat of the far-ranging North Slope Borough (NSB), the local government structure for the region (similar to a county system of organization). It is also the home of the Arctic Slope Regional Corporation, the largest Alaska Natives Claim Settlement Act (ANCSA) Corporation in the state of Alaska which is owned by approximately 10,000 Inupiat Eskimo shareholders. Barrow qualifies as an underserved service area under this proposal.

Nuiqsut is located on the eastern edge of the service area and is the link to providing fiber connectivity to Anchorage, Alaska. Nuiqsut is a smaller community of 433 residents located on the Colville River. There are a total of 1,746 households and 108 businesses that will be

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connected through this project. Nuiqsut qualifies as an unserved service area for this proposal.

Thirty-six percent of the work force in Barrow is employed in education, health, or social services. These areas are economically susceptible to deficiencies in telecommunications. One example involves the Ilisagvik College Village Liaison staff and NSB School District Educators. They are required to receive annual training under the Department of Education, Title III Part A program. This training is available online in most of Alaska, but the instability of the infrastructure in Barrow and Nuiqsut requires staff travel to more urban facilities. This creates an additional and costly burden to comply with state or federally mandated training.

The local Barrow economy is a balance of a subsistence lifestyle with traditional culture and the structure of a modern economic system. However, this area is lacking the basic infrastructure necessary to participate, much less compete, in a global economy. The private sector is strained by additional costs associated with diminished Internet performance. They incur additional staff costs, longer hours, and more expensive hardware that are needed to run enterprise software, which is incredibly slow or completely unavailable due to service outages on a daily basis.

With increased Internet functionality businesses would be more competitive. For example, a local contractor who has a large Department of Defense contract will be able to transmit data to secure sites electronically, instead of saving it on disks and sending it out on commercial air carriers. Unfortunately, with Internet connectivity routinely dropped, Barrow has no opportunity for sustainable economic growth.

In education, many rural communities must share K-12 teachers in critical math and science subjects, or offer no higher-level coursework at all. This lack of quality educational services leaves many youth at risk. Without sufficient resources they cannot develop the skills required for success. This proposal would address those needs while providing truly accessible options for students to continue their studies in higher education via high quality distance learning. Health care providers and their patients also would benefit from regular, consistent access to health care specialists.

The following health, education, and community organizations will be served through this program: North Slope Borough School District with five schools within the service area;

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Samuel Simmonds Memorial Hospital; Barrow Public Health Clinic and Nuiqsut Public Health Clinic; Arctic Slope Regional Corporation; Upeagvik Inupiat Corporation; Kuukpik Corporation; Native Village of Barrow and the Inupiat Community of the Arctic Slope; Alaska State Troopers; Ilisagvik College; Inupiat Heritage Center, Barrow Airport; and Barrow Search and Rescue and Nuiqsut Search and Rescue.

As part of this project, Eskimos Inc. has secured [REDACTED] commitment for purchasing access to the middle mile network and they will serve as the anchor tenant to the system. This access will be used to serve the critical access facilities and provide last mile services for households and businesses, and [REDACTED] has committed to bringing broadband-level Internet access to all of the villages benefitting from this build-out. Additionally, [REDACTED] has committed to construction-manage the project and provide for all initial operating and maintenance costs associated with the system, and share that cost among all carriers that will provide service through the system.

The project will offer wholesale service, at reasonable rates and terms, at these interconnection points for those carriers that wish to provide their own last-mile solutions. We intend negotiate in good faith with all parties that make a bona fide request for interconnection. Eskimos Inc. will also commit to binding private arbitration of disputes concerning the awardees' interconnection obligations. These policies will allow other carriers to provide consumers in rural Alaska with a choice of service providers.

Eskimos Inc. will abide by the principles contained in the FCC's Internet Policy Statement and will adhere to these principles for the proposed project. We will not, with respect to the facilities funded under the proposed project, intentionally favor any lawful Internet applications and content over others.

The proposed network is comprised of eight sites, designed as a network of high capacity radios with an initial configured capacity for the network of 465 Mbps (3 OC-3s). The two end terminals will be at Barrow and the oil exploration site of Oooguruk with one terminal in Nuiqsut that serves as both a terminal and repeater site; there will be a total of five remote repeater sites. These repeater sites are not near a road system or communities that are occupied fulltime. These sites will utilize fully redundant, automatic-switching power generation systems and be provisioned with sufficient battery backup capacity to support full operation for



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48 hours. Most of the sites are located in the National Petroleum Reserve Alaska (NPR-A) and could provide emergency services support in this remote region and a variety of other needed communication services should the NPR-A be developed. The sites will be fully provisioned for remote monitoring of the power generation, fuel systems, environmental controls and conditions, aviation beacons, radio functions, and site security.

Eskimos Inc. will contract the construction and deployment of the proposed network. Eskimos Inc. has entered into an agreement with [REDACTED] for general design, engineering, and management of the system deployment and will purchase a significant portion of the capacity on the network upon its completion. Eskimos Inc. has also entered into a Teaming Agreement with [REDACTED] for significant involvement in the design, engineering, logistics, and construction of the proposed network [REDACTED] is a licensed construction general contractor with successful experience managing design-build telecommunication projects in the harsh environment of rural Alaska. [REDACTED]

The overall broadband system cost is [REDACTED] and we expect that the network will have 1,134 subscribers to the terrestrial broadband service within one year (60 percent of potential subscribers). This project will create or save an estimated 300 jobs over the next seven years through economic development.

Description of BTOP Project Purpose (BTOP Applicants Only Next Three Questions)

9. BTOP Statutory Purpose: